REMARKS/ARGUMENTS

Claims 1-3, 5-7, and 9-20 are rejected under 35 U.S.C. 112, first paragraph inasmuch as the pH ranges recited pertain to specific buffering agents.

Claims 1-3, 5-7, and 9-20 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Genders et al (U.S. Patent No. 6,004,445) and further in view of Scheder.

Claims 1 and 14 are amended to recite a stack operation range of from pH 6 to pH 10 when a sodium-borate/boric acid buffer is utilized, and from pH3 to pH 6 when a sodium acetate/acetic acid buffer is utilized. Support for this recitation is found on page 9, lines 19-22 of the Utility Application.

Claims 1 and 14 are further amended to recite a method for maintaining solutions within a stack to certain pH values. Support for this limitation is found on page 9, lines 18 and 28.

The Applicants appreciate the withdrawal of Genders as a §102(b) reference.

Applicant's invention

The instant invention provides a method for internally using buffer to protect large (i.e. 0.4 square meters cell surface area) electrodialysis stacks. Specifically, the method continuously and automatically maintains the pH of product- and byproduct-solutions as they are formed within the stack, and while they remain in the stack. This differs from the prior art which does not have such an internal protective mechanism. This is because the prior art stacks are much smaller than the 0.4 square meter size now recited in claims 21 and 22.

References Teach
Away From Each Other

Claims 1-3, 5-7, and 9-20 are rejected under 35 U.S.C. 103(a) as obvious over Genders et al (U.S. Patent No. 6,004,445) and further in view of Scheder.

Applicants submit that Genders is not combinable with Scheder. Genders requires anionic membranes (part of its bipolar membrane 34). In contrast, Scheder eschews anionic membranes to prevent precipitation, to wit:

> Firstly, it was observed that the anion membranes have a tendency of rapid clogging, as a result of which the cell output is progressively diminished…for the foregoing reasons, I concluded that anion membranes should be eliminated altogether and replaced by neutral membranes having substantially no fixed charges. *(Scheder,* Col. 1 lines 44 to 59.)

Where the prior art contains apparently conflicting teachings, each reference must be considered "for its power to suggest solutions to an artisan of ordinary skill. . . . considering the degree to which one reference might accurately discredit another." Medichem, S.A. v. Rolabo, S.L., 437 F.3d 1157, 1165 (Fed. Cir. 2006). Here, *Scheder* clearly teaches that neutral membranes in place of anionic ones are required to prevent precipitation and nothing in *Genders* suggests that this teaching is incorrect and as such any combination should exclude anionic membranes.

Also, Applicants reiterate its November 2, 2007 traversal that Scheder cannot add buffer to product stream (as claimed); otherwise, its product (whey) will be destroyed. *Scheder* cannot be adapted to add the buffer to the production (whey) stream inasmuch as the purpose of *Scheder* is to purify the whey by removing minerals therefrom. The addition of any buffer to the whey, as the present invention teaches, would irrevocably contaminate the product stream. (See Sec. 1.132 Affidavit, submitted on November 2, 2007.)

Lastly, Genders' use of "buffer" as a term does not change the fact that no buffering is occurring in Genders. For example, Genders adds no buffer to control the pH of the by-product (base) compartments. That is why the concentration of the by-product caustic (co-product) produced in the base compartment increases from 1.5 molar (pH = 13.7) to 2.3 molar (pH = 14.3). The caustic concentration builds up in Genders due to the lack of a buffer.

Genders' "buffer" is nothing more than a cation feedstock to replenish its depleting ascorbate. The cation feedstock is used to maintain conductivity of the cation to the base compartment. No pH control is occurring in Genders.

In light of the foregoing, Applicants request withdrawal of the §103 rejection and allowance of the claims.

An earnest attempt has been made hereby to respond to the April 15, 2009 Official Action. All claims are deemed in condition for allowance. If the Examiner feels that a telephonic interview will expedite allowance, he is respectfully urged to contact the undersigned. Claims 1-3, 5-7, and 9-22 currently are pending in the application.

Dated: September 15, 2009

Respectfully submitted,

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